
**OFFICE OF
THE INSPECTOR GENERAL**

**U.S. NUCLEAR
REGULATORY COMMISSION**

Review of ADAMS

OIG-02-A-12 June 12, 2002

AUDIT REPORT



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June 12, 2002

MEMORANDUM TO: William D. Travers
Executive Director for Operations

FROM: Stephen D. Dingbaum/**RA**
Assistant Inspector General for Audits

SUBJECT: REVIEW OF ADAMS (OIG-02-A-12)

Attached is the Office of the Inspector General's audit report titled, *Review of ADAMS*.

This report reflects the results of our review to determine how effectively NRC has implemented ADAMS and to assess what additional actions are required by NRC to make ADAMS successful.

After implementing the system, NRC management completed a number of system fixes and upgrades to improve ADAMS' functionality and overall usefulness to NRC offices. However, management oversight of ADAMS is still hampered by weak management controls. Specifically, ADAMS lacks: a finalized systems development methodology policy; adequate steering group guidance; complete reporting of cost information to the Office of Management and Budget; and sufficient security access for ADAMS contractors. As a result, weaknesses continue in ADAMS project management, the costs associated with ADAMS will not be accurately reported, and sensitive information in ADAMS is at risk of disclosure to unauthorized individuals.

This report makes four recommendations to improve ADAMS management controls.

The comments your office provided in the May 24, 2002, memorandum have been incorporated into the report, where appropriate. Appendix B contains the memorandum in its entirety.

If you have any questions, please call me at 415-5915.

Attachment: As stated

cc: Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield

cc: R. McOsker, OCM/RAM
B. Torres, ACMUI
G. Hornberger, ACNW
G. Apostolakis, ACRS
J. Larkins, ACRS/ACNW
P. Bollwerk III, ASLBP
K. Cyr, OGC
J. Cordes, Acting OCAA
S. Reiter, Acting CIO
J. Funches, CFO
P. Rabideau, Deputy CFO
J. Dunn Lee, OIP
D. Rathbun, OCA
W. Beecher, OPA
A. Vietti-Cook, SECY
W. Kane, DEDR/OEDO
C. Paperiello, DEDMRS/OEDO
P. Norry, DEDM/OEDO
J. Craig, AO/OEDO
M. Springer, ADM
R. Borchardt, OE
G. Caputo, OI
P. Bird, HR
I. Little, SBCR
M. Virgilio, NMSS
S. Collins, NRR
A. Thadani, RES
P. Lohaus, OSP
F. Congel, IRO
M. Federline, NMSS
R. Zimmerman, RES
J. Johnson, NRR
H. Miller, RI
L. Reyes, RII
J. Dyer, RIII
E. Merschoff, RIV
OPA-RI
OPA-RII
OPA-RIII
OPA-RIV

EXECUTIVE SUMMARY

BACKGROUND

The Agencywide Documents Access and Management System (ADAMS) is the U.S. Nuclear Regulatory Commission's (NRC) electronic recordkeeping system that maintains the official records of the agency. The system was declared operational on April 1, 2000, despite system shortfalls with regard to functionality, ease of use, reliability, document tracking, and reporting capabilities desired by the agency. Because of these problems, in May 2000, the Chairman directed an assessment of the effectiveness and efficiency of ADAMS. In response to the Chairman's tasking memoranda, OCIO developed an ADAMS action plan and obtained an independent assessment of ADAMS.

PURPOSE

The objectives of this audit were to 1) determine how effectively NRC has carried out the Chairman's requests, and 2) assess what additional actions are required by NRC to make ADAMS successful.

RESULTS IN BRIEF

ADAMS cost millions of dollars more than expected, took longer to become operational than anticipated, and initially failed to produce significant improvements in document management.

Progress Made After ADAMS Implementation

After implementing the system, NRC management completed a number of system fixes and upgrades to improve ADAMS' functionality and overall usefulness to NRC offices. According to a user customer satisfaction survey, users favor the current version of ADAMS over the previous version that received a negative review just after the system became operational. For example, in one response, 72.7 percent of the users agreed or strongly agreed with the statement, "The information that I get is current and up to date." However, ADAMS is now at a crossroads and a decision needs to be made on whether ADAMS should migrate to a web-based system. Regardless of this decision, specific management controls need to be improved.

Management Controls Not Fully Implemented

Management oversight of ADAMS is hampered by weak management controls. Specifically, ADAMS lacks: a finalized systems development methodology policy; adequate steering group guidance; complete reporting of cost information to the Office of Management and Budget; and sufficient security access for ADAMS contractors. As a result, weaknesses continue in ADAMS project management, ADAMS costs will not be accurately reported, and sensitive information in ADAMS is at risk of disclosure to unauthorized individuals.

RECOMMENDATIONS

This report makes four recommendations to the Executive Director for Operations to improve ADAMS management controls.

AGENCY COMMENTS

On May 24, 2002, the Executive Director for Operations (EDO) responded to our draft report with suggested changes and provided the basis for those changes. Primarily, the suggested changes clarify the context of the Exhibit 300B to the Office of Management and Budget.

ABBREVIATIONS AND ACRONYMS

ADAMS	Agencywide Documents Access and Management System
COTS	commercial off-the-shelf
FY	fiscal year
IT	information technology
Methodology	Systems Development and Life-Cycle Management Methodology
NRC	U.S. Nuclear Regulatory Commission
OCIO	Office of the Chief Information Officer
OIG	Office of the Inspector General
OMB	Office of Management and Budget

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I. BACKGROUND

The Agencywide Documents Access and Management System (ADAMS) is the U.S. Nuclear Regulatory Commission's (NRC) electronic recordkeeping system that maintains the official records of the agency. The ADAMS project likely represents the single largest information technology system developed by the NRC.

During the strategic planning process in 1993, development of ADAMS was given the highest priority by internal customers, including a review board of senior program managers. The staff envisioned a system with the tools for creating, storing, retrieving, and retiring documents. The system would capture incoming documents upon receipt, distribute them to the appropriate staff and manage electronic records. ADAMS would replace numerous stovepipe document management systems. NRC management wanted a paperless environment, and at the same time maintain consistency with the year 2000 compliance plan.¹

Original plans called for ADAMS to be implemented within two years while complying with a multitude of system requirements specific to NRC. NRC explored both government and commercial sources of document management products. However, no single product met all system requirements. Therefore, system requirements were met through a combination of commercial off-the-shelf (COTS) and custom developed software. The custom developed software incorporated the business rules defined by the NRC that could not be provided by COTS software at the time that NRC implemented ADAMS.

The system was not operational within the two-year deadline established by the former Chairman. However, ADAMS became operational on April 1, 2000, in spite of system shortfalls with regard to functionality, ease of use, reliability, document tracking, and reporting capabilities. In May 2000, the current Chairman directed a two-phased assessment to capture the important issues and problems with the effectiveness and efficiency of ADAMS implementation. First, office heads were asked to identify the problems that needed to be addressed to make ADAMS an efficient and effective tool. Second, the Office of the Chief Information Officer (OCIO) was tasked with clustering the office identified problems into challenge areas and developing an Action Plan to address each area. The Chief Information Officer (CIO) formed the ADAMS Steering Group of NRC agency officials who classified specific problems identified by the offices into ten challenge areas that would bring about the desired changes to ADAMS.

¹The compliance plan was part of the NRC effort to be able to use the computer systems after January 1, 2000. NRC developed an inventory of systems that included a ranking based on the criticality of the system to Agency operations.

Previously Identified ADAMS Security Weaknesses

In two other audit reports generated during the course of this audit, the Office of the Inspector General (OIG) made recommendations to strengthen ADAMS security weaknesses. The information contained in these reports was deemed sensitive, not for public release and not for release in ADAMS; therefore, discussion pertaining to specific weaknesses has been omitted. As part of the fieldwork for the first report, *Independent Evaluation of NRC's Information Security Program as Required by the Government Information Security Reform Act* (OIG-01-A-14, September 10, 2001), ADAMS security controls were tested during a vulnerability assessment. The OIG recommended that the Executive Director for Operations ensure that required security controls are implemented and that corrections are made, as appropriate. In the second report, *Review of the Unauthorized Release of Documents to the ADAMS Public Library* (OIG-01-A-16, September 24, 2001), the OIG made two recommendations to improve ADAMS security.

II. PURPOSE

The objectives of this audit were to 1) determine how effectively NRC has carried out the Chairman's requests, and 2) assess what additional actions are required by NRC to make ADAMS successful.

III. FINDINGS

The management of major information technology (IT) projects has been a significant challenge for agencies and ADAMS was a significant challenge for NRC. NRC officials did not fully employ management controls to ensure the success of ADAMS. ADAMS cost millions of dollars more than expected, took longer to complete than anticipated, and initially failed to produce significant improvements in document management. The staff had envisioned a system with the tools for creating, storing, retrieving, and retiring documents. The proposed system would be able to capture incoming documents upon receipt, distribute them to the appropriate staff and manage electronic records. ADAMS would replace numerous stovepipe document management systems. Even though NRC management completed a number of system fixes and upgrades to improve ADAMS' functionality and overall usefulness to NRC offices, more needs to be done.

A. PROGRESS MADE AFTER ADAMS IMPLEMENTATION

In response to the Chairman's request, OCIO gathered office input and composed the ADAMS Assessment Action Plan which identified challenge areas that the agency must solve to make ADAMS an effective agency tool. The

majority of the tasks intended to solve the problems have been addressed. However, OCIO needs to do more to be fully responsive to the Chairman's request and to further improve the system. Specifically, functionality problems have not been fully addressed.

OCIO has implemented many of the tasks identified within the 10 challenge areas of the ADAMS Assessment Action Plan. The challenge areas include 52 tasks. Of the 52 tasks, 24 were completed within 12 months; the balance represents ongoing efforts. Also, a 2001 information technology customer satisfaction survey reflects increasingly favorable customer satisfaction with ADAMS. The survey contained several questions regarding ADAMS. For example, in one response, 72.7 percent of the users agreed or strongly agreed with the following statement describing ADAMS reliability, "The information that I get is current and up to date." OCIO has also recorded in its tracking system increases in the level of usage and a decrease in the number of complaints pertaining to ADAMS. However, while many tasks were completed within the goals of the plan, problems such as full text searching, revising applicable directives, and cleaning up the existing ADAMS database, have not been fully addressed.

The ADAMS Assessment Action Plan identified the goals to make ADAMS an effective agency tool such as the introduction of three new software releases of the ADAMS product. OCIO planned to accomplish this goal in the following three phases:

- # **Phase 1:** Migration Assessment -- Perform a detailed assessment for migrating to the next two planned releases of the vendor's software, versions 4.0 and 5.0. This was accomplished by November 2000.
- # **Phase 2:** ADAMS 4.0 -- Replace existing COTS items with newer COTS products with little or no change to the custom developed software. This action was delayed from FY 2001 to September 2002, but is still planned to take place.
- # **Phase 3:** ADAMS 5.0 -- Building on ADAMS 4.0, replace as much custom developed software with inherent COTS functionality as possible, streamline support, and improve public access. No projection date has been set for a decision on whether to migrate to ADAMS 5.0.

During phase 2, migration to the ADAMS 4.0 software version should address functionality problems, such as full text search capability. In addition, the ADAMS 4.0 software version will replace existing software which is no longer supported by the vendor. This replacement should improve performance and stability. However, the degree of improvement will not be known until after the ADAMS 4.0 software version is actually in use. NRC needs to ensure that there are no problems with the new software or its integration into NRC's computer environment. NRC is scheduled to proceed with the ADAMS 4.0 software version by September 2002 after testing by OCIO is completed.

In addition, NRC needs to plan for phase 3, the migration to the ADAMS 5.0 software version which employs a user friendly, web-based interface that reduces reliance on custom developed software. An OCIO contractor recommended migrating to the ADAMS 5.0 software version to satisfy user expectations without implementing the ADAMS 4.0 software version. Funding has been established for ADAMS 5.0 in OCIO's planned budget in FY 2003 and FY 2004. A directional study is scheduled to begin in October 2002 to define the scope of ADAMS 5.0 and develop a detailed project plan. The ADAMS 5.0 software version will cost the agency a total of \$720,000 in FYs 2003 and 2004. The decision to upgrade to ADAMS 5.0 is dependent on whether OCIO can deploy the web-based software for the staff to use for search and retrieval and the results of an ADAMS 5.0 directional study. NRC is well aware that a decision needs to be made and intends to take action after the ADAMS 4.0 software version is installed and user-tested. Therefore, OIG makes no recommendation.

Summary

The ADAMS Assessment Action Plan identified goals to make ADAMS an effective agency tool. Thus, completion of all of the tasks identified in the ADAMS Assessment Action Plan is needed to sufficiently enhance ADAMS. User expectations have not been fully met because tasks remain such as implementing full text search capability, revising and updating applicable directives, and cleaning up the existing ADAMS database. OCIO is aware of its user credibility problems and plans to complete the remaining tasks in the ADAMS Assessment Action Plan. OCIO needs to plan for future development, especially migrating from ADAMS 4.0 to 5.0.

B. MANAGEMENT CONTROLS NOT FULLY IMPLEMENTED

Management oversight of ADAMS is hampered by weak management controls. Specifically, ADAMS lacks: a finalized systems development methodology policy; adequate steering group guidance; complete reporting of cost information to the Office of Management and Budget (OMB); and sufficient security access for ADAMS contractors. As a result, weaknesses continue in ADAMS project management, ADAMS costs will not be accurate, and sensitive information in ADAMS is at risk of disclosure to unauthorized individuals.

Background

Management controls are the organizational policies and procedures used to reasonably ensure that (i) programs achieve their intended results; (ii) resources are used consistent with agency mission; (iii) programs and resources are protected from waste, fraud, and mismanagement; (iv) laws and regulations are

followed; and (v) reliable and timely information is obtained, maintained, reported and used for decision making.²

OMB Circular No. A-130 specifies guidance pertaining to information systems management oversight. Agencies shall establish information system management oversight mechanisms that ensure that each information system meets agency mission requirements. Also, agencies shall provide for periodic review of the information system to determine how mission requirements might have changed; whether the system continues to fulfill ongoing and anticipated mission requirements; and what level of maintenance is needed to ensure the system meets mission requirements cost effectively. Further, the guidance states that agencies must ensure that the official who administers a program supported by an information system is responsible and accountable for the management of that information system throughout its life-cycle. Agencies must also ensure that a major information system proceeds in a timely fashion towards agreed-upon milestones in an information system life-cycle, meets user requirements, and delivers intended benefits to the agency and affected public. This requires coordinated decision making about the information, human, financial, and other supporting resources that comprise the total system.

The following sections of this report describe the shortcomings of some key management controls over the ADAMS project.

Inconsistently Applied Systems Development Methodology

At the time of OIG's 1999 audit of the ADAMS project, OCIO was not consistently applying the Systems Development and Life-Cycle Management Methodology (methodology). The absence of a consistently applied methodology increases the chances that a project will not meet agency mission requirements. ADAMS cost more than expected, took longer to complete than anticipated, and did not meet functional requirements. OIG questions whether the methodology is currently being consistently followed because it has not been published in NRC's Management Directives.

The methodology starts with the definition of initial project requirements and continues through the decommissioning of systems. Adherence to the methodology's procedures and standards will likely yield improved product quality, higher productivity, and portability of the personnel. Presumably, product quality improves because everybody is using the best approach at that time and productivity improves because there is no wasted time. Further, personnel should become portable from one project to another because all projects within NRC follow the same standards. Such structure and discipline were not present at the time of OIG's 1999 review of the ADAMS project because OCIO did not provide

²*OMB Circular No. A-130, Transmittal No. 3, Appendix III, "Security of Federal Automated Information Resources," revised February 8, 1996, and OMB Circular A-123, "Management Accountability and Control," revised June 21, 1995, provides the guidance for assessing and reporting on controls.*

an ADAMS Project Action Plan, a comparison of actual cost to budget, or a detailed testing program.

At the time of this audit, NRC staff did not have ready access to the methodology because it had not been placed in NRC's Management Directives system. In January 1997, OCIO issued guidance on the methodology and put it in place shortly after the beginning of the ADAMS project; however, OCIO had not been following the methodology at the time of the 1999 OIG review of ADAMS. Presently, OCIO asserts that processes and procedures are in place to ensure use of the methodology in IT projects.

The guidance on the methodology was issued to selected office directors. Several organizational changes have occurred since then; therefore, present NRC managers may not possess a copy of or even be aware of the guidance. Management Directives accessible to NRC staff have not been updated to include the methodology. The guidance for tailoring NRC's methodology is important to system sponsors and project managers so they can fully understand their roles. In essence, emphasis on the methodology is needed to ensure that resources are not wasted on software development that does not meet user requirements. Following the methodology also increases the likelihood that new versions of ADAMS can be seamlessly integrated into the organization.

RECOMMENDATION

OIG recommends that the Executive Director for Operations:

1. Finalize and issue Management Directive 2.5 (Draft), "*Application Systems Life-Cycle Management*" and Handbook 2.5 (Draft) "*System Development and Life-Cycle Management Methodology*."

Inadequate Guidance on Making Agencywide Decisions

The ADAMS Steering Group operates without a clearly defined mission, objective, scope or ending term because these intentions were not established when the Steering Group was formed. In addition, the Steering Group was formed after ADAMS became operational. Separation of key responsibilities and better communication will provide more discipline to the group. Thus, the role and responsibilities of this group should be clear to all parties so there is a common set of expectations.

During the ADAMS project, communication between the user offices and the technical office developing the system was not adequate to effectively oversee changes and make vital decisions concerning the system. OCIO established ADAMS Partners to represent the offices at partners meetings and focus groups as needed. The goal of the ADAMS Partners concept was to facilitate the planning and implementation of ADAMS. However, information learned from the ADAMS Partners did not flow up the chain of command and back to OCIO in a manner that kept all parties abreast of key developments.

After ADAMS deployment, the CIO formed an ADAMS Steering Group of senior agency executives to assist in the process of assessing ADAMS issues. According to a key OCIO official, the Steering Group is an effective vehicle for making agencywide decisions concerning ADAMS. This individual also stated that such a communication vehicle would have been helpful throughout the ADAMS project. The role of the Steering Group, as described by the CIO in the ADAMS Assessment Action Plan, was to:

- Develop a consensus on the current and future direction of the ADAMS program;
- Prioritize issues;
- Discuss tradeoffs and alternative deployment approaches;
- Provide advice on the refinement of the ADAMS Assessment Action Plan; and
- Participate in the presentation of the ADAMS Assessment Action Plan to the Executive Council and the Chairman.

Members of the Steering Group provided examples of the lack of clear communication such as:

- When OIG asked members their opinion of the purpose of the Steering Group, there was no clear consensus to the answer, as most members did not remember seeing the purposes listed in the ADAMS Assessment Action Plan.
- Minutes of meetings were not routinely sent to members although the majority of the members would prefer to receive them. The members thought minutes would be especially helpful to determine what was discussed at meetings they were unable to attend.
- A member expressed the opinion that the level of issues brought to the Steering Group is not as important as they were during the implementation of ADAMS.

With a clearly delineated charter, alternate members would understand their roles and responsibilities during attendance at the monthly scheduled meeting. A charter would ensure that the valuable expertise of its members is effectively applied to the Steering Group's purpose.

Because of the inadequate guidance, separation of duties is a concern regarding the leadership for the Steering Group. Issues that should be reviewed and resolved by the Steering Group may not rise to that level. The Information, Records, and Document Management Division (IRDMD) Director is the overall ADAMS project manager, chairs the ADAMS Steering Group, leads 9 of the 10

challenge areas of the ADAMS Assessment Action Plan, and sets the Steering Group meeting agenda. Separation of duties is the specific management control standard applicable to this situation that has not been employed. Key duties and responsibilities in authorizing, processing, recording, and reviewing official agency transactions should be separated among individuals. Managers should exercise appropriate oversight to ensure individuals do not exceed their assigned authorities. A management control would be to select another member of the Steering Group as the chair, due to the IRDMD Director's responsibility and amount of direct involvement with ADAMS' technical development.

A Management Directive is expected to be issued in 2002 to clarify expectations, roles and responsibilities for steering committees³, which should encompass issues raised in this audit report. That guidance needs to be applied to the ADAMS Steering Group.

OCIO informed the OIG at an exit conference on March 7, 2002, that the ADAMS Steering Group was phased out on March 4, 2002. Future ADAMS items will be addressed by an interoffice group focused on information technology and information management planning and management issues. Although the ADAMS Steering Group has been phased out, the functions of the Steering Group are still required to ensure that ADAMS issues are addressed, especially major changes such as migrating to ADAMS 5.0. Therefore, the proposed interoffice focus group needs defined roles and responsibilities including segregation of duties.

RECOMMENDATION

OIG recommends that the Executive Director for Operations:

2. Clearly define the role and responsibilities of the interoffice group focused on information technology. Clarification should include: the group's mission; objectives, impartial leadership; and a defined membership.

Incomplete Reports to OMB

NRC did not report almost \$3.7 million of costs for the ADAMS project to OMB for FY 2001. OMB requires complete reporting of all costs, including those associated with project development and operation. OCIO management categorized costs attributable to ADAMS under functions other than the ADAMS program costs because OCIO believes that OMB did not specify in the guidance the specific costs that should be reported. In addition, OCIO has not considered document processing costs as an ADAMS related cost.

³ Memorandum Report OIG-01-A-01: *The National Materials Program Steering Committee* (12/14/2000), contains the recommendation that the agency, "Institute a requirement in the Management Directives that agency steering committees formally define their roles and responsibilities." The Office of the Executive Director for Operations agreed that such a management directive be developed.

OMB Circular No. A-11 Part 3, "Planning, Budgeting and Acquisition of Capital Assets," provides NRC management officials with guidance for preparing NRC's FY 2002 OMB Exhibit 300B, ADAMS, Capital Asset Plan and Justification (Exhibit 300B). The Circular clarifies the expectations for the agency's Exhibit 300B, that must be submitted for major IT systems or projects. The following topics must be included:

- Part I:** Summary of spending for projects stages, which is the amount of budget authority and outlays;
- Part II:** Justification, which is a clear statement of how the asset will help meet the agency mission, program management and acquisition strategy; and,
- Part III:** Cost, schedule, and performance goals.

In addition, *OMB Circular No. A-11, Section 53, Information Technology* contains a section designated "What special terms must I know." The definition of information technology under the terms, states, "information technology includes computers, ancillary equipment, firmware and similar procedures, services (including support services) and related resources."

Inaccurate reporting of costs skews the NRC's Exhibit 300B submission in several ways:

- The cost is underreported to OMB;
- The baseline is not correct; and
- The total amount of the project cannot be calculated accurately.

NRC underreported the costs for ADAMS by almost \$3.7 million for FY 2001. NRC staff reported \$3.2 million to OMB as the summary of spending for ADAMS maintenance and operational phases. In response to a question on ADAMS costs from the Chairman, the staff provided a table with FY 2001 costs of \$7 million, which includes production, ADAMS action items, and document processing improvements. The latter two costs should have been included in the Exhibit 300B submission.

OCIO staff stated that the information provided to OMB in the Exhibit 300B and the information provided to the Chairman are consistent. Further, they believe that they are in compliance with OMB guidelines because the cost of document processing is not a cost of ADAMS operations.

According to the definition of IT in *OMB Circular A-11, Section 53*, supporting services such as document processing costs should be included. The OMB IT Specialist who reviews all Federal agencies 300B submissions, and the OMB Budget Examiner for NRC, told OIG that NRC should be including full costs in the

Exhibit 300B submission, from the planning of a system through its disposal. OIG also met with a General Accounting Office (GAO) Associate Director for IT. In his opinion, if GAO audited an information system at NRC, it would expect that the full cost of the system would be included in the Exhibit 300B submission.

This underreporting of the total costs of ADAMS is expected to continue. The FY 2002 costs to be submitted for the Exhibit 300B are estimated at about \$3.1 million. However, an additional \$3.4 million in production, action items, and document processing will not be included in the total ADAMS costs for FY 2002.

The underreporting of costs also affects the ADAMS baseline. The OMB current baseline is an amount showing how much above the previous year's amount the project cost the agency. Each year OCIO must justify and OMB must approve the new baseline. The approved amount is used as the baseline for the current year. When an agency reports an amount 10 percent above the current baseline, the agency is required to provide an explanation for the cost and schedule variance.

NRC's current interpretation of OMB requirements makes the agency appear to be in compliance with the 10 percent baseline requirement. However, this compliance is achieved by not reporting the complete costs of ADAMS. According to OMB, adjustments to the current baseline will be accepted with proper justification so that the information can be accurate for the future.

The underreporting of the cost of ADAMS on a yearly basis also calls into question the total amount NRC has spent on ADAMS. In 1997, the OCIO projected that ADAMS would cost \$12.7 million. The ADAMS costs reported to OMB in Exhibit 300B to date were \$25.6 million. The \$25.6 million was underreported by \$5.6 million because the reported costs did not include associated routine document processing costs, ADAMS Assessment Action Plan items associated with document processing, the historical document retrofit project, disaster recovery costs, or related full-time-equivalent resources.

At the exit conference, OCIO disagreed with OIG's position that NRC needs to report more than project costs. The staff believes that the ADAMS costs contained in Exhibit 300B submissions have been consistent with both written and verbal OMB guidance, and with the project as described in the business case. The OCIO staff intends to continue its interactions with OMB to ensure compliance with OMB guidance for reporting full costs. After the exit conference, OIG re-verified with OMB officials that the full cost of systems needs to be reported.

RECOMMENDATION

OIG recommends that the Executive Director for Operations:

3. Accurately and fully disclose ADAMS current and future costs in the *Capital Asset Plan and Justification* (Exhibit 300B) to the Office of

Management and Budget, which includes adjusting the baseline to the correct amount.

Insufficient Security Access Granted to ADAMS Contractors

Essential ADAMS contractors with system administrator rights have not received security clearances appropriate for their position. Management selected a low level of security clearance for contractors with system administrator rights who handle sensitive documents. Individuals who view and maneuver sensitive information without the appropriate security clearance pose risk to the NRC.

Certain ADAMS contractors, handling document processing, possess the IT Level II security clearance. *Management Directive 12.3, Personnel Security Program, Handbook Part I*, states that the levels of security that contractors should possess are based upon their capability to access computer systems. Specifically, the policy states:

IT Level I involves responsibility for the planning, direction, and implementation of a computer security program; major responsibility for the direction, planning, and design of a computer system, including the hardware and software; or the capability to access a computer system during its operation or maintenance in such a way that could cause grave damage; or the capability to realize significant personal gain from computer access.

In contrast, the “lower” Level II of access to NRC computer systems is described in the Management Directive simply as, “All other IT positions.” The duties performed by the ADAMS contractor staff fit the IT Level I description because their duties involve management responsibilities with the capability to do harm, or have significant access to ADAMS and the sensitive documents contained therein.

OCIO staff provided OIG a list of names of the contractor staff working on contracts for ADAMS Centralized Document Processing and Document Retrofit Management. There were approximately 40 ADAMS contractor staff who process documents into ADAMS under these contracts, with at least four having system administrator rights. In addition, the contractors perform the database clean up. The statement of work for the ADAMS Centralized Document Processing contract identified the Personnel Security Requirement as follows: “All contractor personnel working under this task order require an ADP Security [IT] Level II Clearance.” Also, the statement of work for the Document Retrofit Management services contract did not include the personnel security requirement. OIG notes that the documents handled by ADAMS contractors under these task orders may contain sensitive information. OCIO staff later confirmed that certain ADAMS contractors, handling document processing, have IT Level II security. OIG believes the IT Level II security is insufficient for the contractors with system administrator rights to ADAMS.

RECOMMENDATION

OIG recommends that the Executive Director for Operations:

4. Require ADAMS contractors with system administrator rights to have Information Technology Level I Security Access.

IV. CONSOLIDATED LIST OF RECOMMENDATIONS

OIG recommends that the Executive Director for Operations:

1. Finalize and issue Management Directive 2.5 (Draft), "*Application Systems Life-Cycle Management*" and Handbook 2.5 (Draft) "*System Development and Life-Cycle Management Methodology*."
2. Clearly define the role and responsibilities of the interoffice group focused on information technology. Clarification should include: the group's mission; objectives, impartial leadership; and a defined membership.
3. Accurately and fully disclose ADAMS current and future costs in the *Capital Asset Plan and Justification* (Exhibit 300B) to the Office of Management and Budget, which includes adjusting the baseline to the correct amount.
4. Require ADAMS contractors with system administrator rights to have Information Technology Level I Security Access.

V. OIG RESPONSE TO AGENCY COMMENTS

On May 24, 2002, the Executive Director for Operations (EDO) responded to our draft report with suggested changes and provided the basis for those changes. Primarily, the suggested changes clarify the context of the Exhibit 300B to the Office of Management and Budget. We have incorporated the editorial suggestions to this report, where appropriate. Complete EDO comments can be found in Appendix B.

SCOPE AND METHODOLOGY

The objectives of this audit were to 1) determine how effectively NRC has carried out the Chairman's requests and 2) assess what additional actions are required by NRC to make ADAMS successful. To accomplish the audit objectives, OIG assessed the agency's ADAMS efforts to date. OIG analyzed the ADAMS Assessment Action Plan, Management Directives, Systems Development and Life-Cycle Management Methodology, and other documents needed for ADAMS. In addition, OIG analyzed recommendations from previous audits and evaluations for inclusion. OIG interviewed staff and managers in NRC offices and one region based on their involvement in ADAMS, and interviewed OMB management to assess budget reporting requirements.

This work was conducted from April 2001 through January 2002, in accordance with generally accepted Government auditing standards and included a review of management controls related to the objective of the audit. The work was conducted by Ren Kelley, Team Leader; Beth Serepca, Audit Manager; and Vicki Foster, Management Analyst.

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AGENCY COMMENTS



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

May 24, 2002

MEMORANDUM TO: Stephen D. Dingbaum
Assistant Inspector General for Audits
Office of the Inspector General

FROM: William D. Travers 
Executive Director for Operations

SUBJECT: FINAL DRAFT OIG REPORT ON THE REVIEW OF ADAMS

This memorandum responds to your April 10, 2002, memorandum transmitting the final draft audit report on the review of ADAMS. We have reviewed the draft report and note that changes were incorporated in response to staff comments provided during and after meetings with you and your staff. This memorandum provides suggestions for additional changes to the revised report and the rationale for the suggestions.

1. SUGGESTED CHANGES TO REPORT:

On page ii, the following should be added as the first sentence under the heading, **Progress Made after Adams Implementation.**

In responses to Chairman's tasking memoranda of May 22, 2000, and August 29, 2000, (1) an ADAMS action plan was developed which serves as a living document to guide ADAMS corrective actions, and (2) an independent assessment of ADAMS determined that the agency was on an appropriate path to establish an electronic document management system to meet the agency's long-term needs.

BASIS FOR SUGGESTED CHANGE:

To acknowledge that the agency took appropriate actions in response to the Chairman's tasking memoranda.

2. SUGGESTED CHANGES TO REPORT:

On page 12, last paragraph, modify the last sentence to read as follows: "The role of the Steering Group, as described in the June 21, 2000, Network Announcement from the CIO, and subsequently in the ADAMS Assessment Action plan, was to:"

BASIS FOR SUGGESTED CHANGE:

To acknowledge that the CIO provided written guidance to the Steering Group.

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3. SUGGESTED CHANGES TO REPORT:

Revised the last paragraph on page 17 to read as follows:

~~"NRC underreported the costs for ADAMS by almost \$3.7 million for FY 2001. The staff reported \$3.2 million to OMB as the summary of spending for ADAMS maintenance and operational phases. In response to a question on ADAMS costs from the Chairman (June 15, 2001, memorandum from OCFO), the staff provided a table with FY 2001 costs of \$7.0 M. The response noted that in addition to the ADAMS costs, the document processing costs were shown as supplemental information and that the funding identified for the ADAMS Action Plan was for improvements to the document processing function. The items in the table were labeled as ADAMS, ADAMS Action Plan, and Document Processing. Respective costs were \$3.3 M, \$1.2 M, and \$2.5 M. The IG believes that the latter two costs should also have been included in the Exhibit 300 Report to OMB. NRC officials acknowledge that the total amount spent on ADAMS for FY 2001 was almost \$7 million, which includes production, ADAMS action items, and document processing improvements. The staff believes that the information provided to OMB in the Exhibit 300 Report and the information provided to the Chairman are consistent, even though there are more costs associated with ADAMS than reported; they are in compliance with OMB guidelines because the cost of document processing is not a cost of ADAMS operations. However, OIG disagrees. According . . ."~~

BASIS FOR SUGGESTED CHANGE:

To clarify the context of the Exhibit 300 Report and the information provided to the Chairman of which the ADAMS project costs were one component. Also, see comments below.

4. SUGGESTED CHANGES TO REPORT:

On page 18, revise the 2nd & 3rd sentences in first full paragraph to read as follows:

~~"In 1987, the OCIO projected that ADAMS would cost \$12.8 million for project development cost and \$2.9 million for maintenance cost through FY 2001. The ADAMS costs reported in the OMB Exhibit 300 Report to date were \$25.6 million (\$13.8 million for project development and \$11.8 million for maintenance through FY 2003.)"~~

BASIS FOR SUGGESTED CHANGE:

To show comparable information. In submitting the Exhibit 300 Report, NRC has consulted with and followed OMB directions each year regarding projection of life cycle costs. The initial reporting year was FY 1987 and OMB required projections to FY 2001. Because OMB adds years to the total number of years in the life cycle, the total life cycle cost increases each reporting year.

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5. SUGGESTED CHANGES TO REPORT:

On page 19, add to second full paragraph as the last sentence:

The staff believes that the ADAMS costs contained in Exhibit 300 Reports have been consistent with both written and verbal OMB guidance, and with the project as described in the business case. As experience has been gained, the OMB guidance on the information to be included in Exhibit 300 Reports has increased and been refined over the past several years. OMB, in recent discussions with the staff, stated that reporting of full-time equivalent resources will be explicitly required in the FY 2004 Exhibit 300 Reports. The staff intends to continue its interactions with OMB to help ensure that we comply with OMB guidance for reporting full costs.

BASIS FOR SUGGESTED CHANGE:

To acknowledge that reporting requirements have changed and that NHC's intent is to continue to comply with the latest OMB requirements.